

Spiders of the Genera *Episinus* and *Moneta* from Japan
and Taiwan, with Descriptions of Two New Species
of *Episinus* (Araneae: Theridiidae)

Chiyoko OKUMA¹⁾

大熊千代子¹⁾: 日本および台湾産のヒシガタグモ属と
ヒメヒシガタグモ属 (クモ目: ヒメグモ科)

Abstract The genus *Moneta* O. P.-CAMBRIDGE, 1870, is revived from a synonym of the genus *Episinus* LATREILLE, 1809, and spiders known as "*Episinus*" in Japan and Taiwan are revised and newly divided into two genera. Five species of *Episinus*, i.e., *affinis*, *chikunii*, *kitazawai*, *nubilus* and *punctisparsus*, and 5 species of *Moneta* i.e., *caudifer*, *mirabilis*, *tanikawai*, *spiniger* and *yoshimurai* are redescribed. *Moneta mirabilis* is recorded from Taiwan for the first time, and the male is described for the first time. Two new species, *Episinus makiharai* and *Episinus yoshidai* are described from Taiwan.

The present study was started when I collected an interesting female specimen of *Episinus* in April, 1993 at Kushima City, Miyazaki Prefecture, as one of the results of my field study of spiders of Miyazaki Prefecture supported by Professor Y. HIRASHIMA, President of Miyazaki Municipal University. This specimen was identified as *Episinus mirabilis* BÖSENBERG et STRAND, 1906. However, it was also revealed that Japanese authors misidentified *Episinus mirabilis* as *Episinus caudifer* DÖNITZ et STRAND, which was wrongly treated as a synonym of *Episinus mirabilis* by YOSHIDA (1985). The female specimen I collected in Miyazaki Prefecture is the second one of true *Episinus mirabilis*, which was found 87 years later from its original description.

According to my present study, it became clear that the Japanese and Taiwanese spiders hitherto regarded as *Episinus* should be divided into two genera, *Episinus* and *Moneta*. The latter genus was wrongly synonymized with the former one by LEVI and LEVI (1962). This paper reports the result of my new treatment of the two genera.

Before going further, I wish to express my sincere gratitude to Professor Y. HIRASHIMA, President of Miyazaki Municipal University, for giving me the opportunity to examine the spiders from Miyazaki Pref. and reading of the manuscript of this paper. My thanks are also due to Dr. H. ONO, National Science Museum, Tokyo, Dr. MANFRED GRASSHOFF, Senckenberg Museum, Frankfurt, Mr. H. MAKI-

1) Entomological Laboratory, Faculty of Agriculture, Kyushu University, Fukuoka, 812 Japan
九州大学農学部昆虫学教室 〒812 福岡市東区箱崎 6-10-1

Accepted April 19, 1994

HARA, Forestry and Forest Products Res. Ins., Tôhoku, Mr. H. YOSHIDA, Yamagata and Mr. A. TANIKAWA, Kanagawa for their useful suggestions and offering many valuable specimens for the present study.

The holotypes of the new species described in this paper are deposited in the collection of the National Science Museum (Natural History), Tokyo (NSMT).

The abbreviations used in this paper are as follows: ALE, anterior lateral eye; AME, anterior median eye; PLE, posterior lateral eye; PME, posterior median eye.

Diagnosis of the genera *Episinus* and *Moneta*

The genus *Episinus* LATREILLE, 1809, defined by LEVI and LEVI (1962) is separated from other theridiid genera in the following characters: Carapace slightly longer than wide; clypeus low and flat, projected anteriorly; chelicerae small, with one or two teeth on anterior margin, sometimes absent; abdomen usually widest behind the middle and provided with humps, tubercles, or sometimes small nipples; colulus replaced by two setae; male palpus extremely complicated. However, through the examination of many specimens from Japan and Taiwan, I came to the conclusion that they should be divided into two groups in the generic level. The genus *Moneta* O. P.-CAMBRIDGE, 1870, regarded as a junior synonyms of *Episinus* by LEVI and LEVI (1962) is revived in the present paper, and some species determined as *Episinus* by the previous Japanese authors are transferred to *Moneta*. Characteristics of both the genera are shown in Table 1.

Table 1. Characteristics of the genera, *Episinus* and *Moneta*.

| | Gen. <i>Episinus</i> | Gen. <i>Moneta</i> |
|------------------|---|---|
| Eyes | Eye region roundly elevated or projected anteriorly. | Eye region straight laterally. |
| | Eight eyes arranged more or less circular. | Two rows of eyes generally parallel. |
| | Eye marking* distinctly black. | Eye marking indistinct (small or pale). |
| Cheliceral teeth | Anterior margin of fang furrow with or without a tooth. Posterior margin without tooth. | Anterior margin of fang furrow with two teeth. Posterior margin with a tooth. |
| Legs | Legs somewhat robust, with dusky flecks and marks or bands. | Legs long, slender, usually without flecks and marks. |
| | Hairs rather long and rough, with spines or bristles in addition to serrated bristles on fourth legs. | Hairs short, weak and sparse, generally without spines or bristles except serrated bristles on fourth legs. |
| | Tarsi as usual. | Tarsi very short. |

* Eye marking: colored portion surrounding eyes.

Family Theridiidae

Genus *Episinus* LATREILLE

Episinus LATREILLE, 1809, Genera Crustaceorum et Insectorum, 4: 371. Type species: *E. truncatus* LATREILLE, 1809, from Europe.

Description. Carapace slightly longer than wide; eye region roundly elevated or projected anteriorly, and eight eyes arranged more or less circularly; AME smaller than the others; each eye usually bordered by distinct black marking (eye marking), the markings often large and confluent each other. Chelicerae small, with or without a tooth on anterior margin of fang furrow, without tooth on posterior margin. Male palpus extremely complex; without a lateral projection (paracymbial hook?) on margin of cymbium. Leg formula 1.4.2.3 or 4.1.2.3; all legs somewhat robust, usually pale yellow to brown, with dusky flecks and marks or bands, with comparatively long, dense hairs and with a few dorsal spines or bristles on each patella and tibia. Tarsus not so short. Metatarsus: tarsus of the first leg=100: 20–40.

Episinus affinis BÖSENBERG et STRAND, 1906

(Fig. 1)

Episinus affinis BÖSENBERG et STRAND, 1906, p. 136, pl. 5 (fig. 55) & pl. 12 (fig. 251); SAITO, 1941, p. 196, fig. 230; YAGINUMA, 1960, p. 39, fig. 38, pl. 11 (fig. 65); YAGINUMA, 1970, p. 648; YOSHIDA, 1985, p. 26; YAGINUMA, 1986, p. 46, pl. 11 (fig. 1); CHIKUNI, 1989, p. 38 (fig. 39), 181; ONO *et al.*, 1991, p. 84.

Description. Measurement (in mm): Body length ♀ 4–6, ♂ 3–4; length of legs of 1♀ from Fukuoka and 1♂ from Miyazaki as shown in Table 2.

Male and female: Eye region of carapace roundly elevated; eye markings of ALE, PLE and PME black and large, and confluent each other as shown in Fig. 1, A. Chelicerae with a very small tooth on anterior margin, without tooth on posterior margin. Leg formula 1.4.2.3; all legs usually pale brownish yellow with brown flecks or marks; dorsal hairs on femur somewhat rough and long; with a

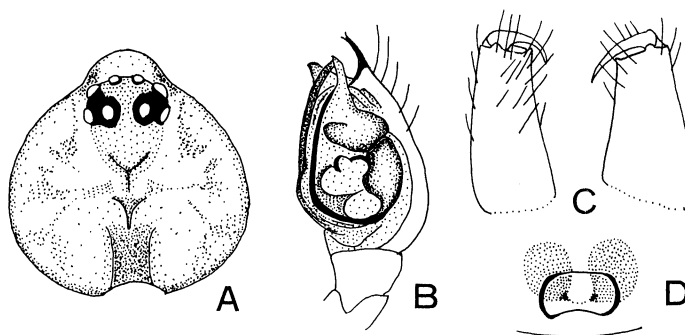


Fig. 1. *Episinus affinis* BÖSENBERG et STRAND, 1906. A: Carapace of female, dorsal view. B: Left palpus of male. C: Left chelicera of female. D: Epigynum.

Table 2. Measurement of leg segments of *Episinus affinis* BÖSENBERG et STRAND
(in mm: ♀/♂).

| Leg | Femur | Patella + Tibia | Metatarsus | Tarsus | Total |
|-----|-----------|-----------------|------------|-----------|-------------|
| I | 3.20/3.00 | 3.4/3.1 | 3.35/3.25 | 0.70/0.70 | 10.65/10.05 |
| II | 2.10/1.75 | 2.0/1.7 | 1.85/1.60 | 0.65/0.65 | 6.60/ 5.70 |
| III | 1.75/1.30 | 1.5/1.1 | 1.45/1.05 | 0.60/0.52 | 5.30/ 3.97 |
| IV | 3.20/2.45 | 3.1/2.5 | 3.20/2.80 | 0.90/0.80 | 10.40/ 8.55 |

few dorsal spines on each patella and tibia of all legs. Metatarsus: tarsus of the first leg=100: 20–24.

Specimens examined. 1♀, Midô, Iwate-machi, Iwate-gun, Iwate Pref., 20. VI. 1975, K. YAMAGISHI leg.; 2♀♀, Naka-ohonai, Tazawako-machi, Kitaakita-gun, Akita Pref., 21. VI. 1975, K. YAMAGISHI leg.; 1♀, Hataya, Yamanobe-machi, Higashimurayama-gun, Yamagata Pref., 16. VI. 1985, H. YOSHIDA leg.; 1♂, Sekiyama-Dorosawa, Higashine-shi, Yamagata Pref., 16. VI. 1986, H. YOSHIDA leg.; 1♀1juv., Univ. of Tsukuba, Tsukuba-shi, Ibaraki Pref., 11. III. 1976, A. TANIKAWA leg.; 1♀, Kawada, Mikurajima Island, Tokyo. 12. VII. 1970, H. ONO leg. (NSMT-Ar 3122); 1♀, Tsukui-shiroyama, Tsukui-gun, Kanagawa Pref., 26. V. 1991, A. TANIKAWA leg.; 1♀, Ishihama, Higashiura-chô, Chita-gun, Aichi Pref., 5. VI. 1993, T. NOHIRA leg.; 1♀, Inoko, Tottori-shi, Tottori Pref., 6. X. 1961, T. ARITA leg.; 1♀, Okinoshima Island, Munakata-gun, Fukuoka Pref., 24–31. VII. 1962, M. SHIGA leg.; 1♀, Mt. Tachibanayama, Fukuoka-shi, Fukuoka Pref., 13. XI. 1973, K. YAMAGISHI leg.; 1♀, same locality, 31. III. 1976, H. MAKIHARA leg.; 1♀, same locality, 23. II. 1977, Y. KANAMARU leg.; 1♀, Mt. Ohoshiyama, Mine-chô, Tsushima Island, Nagasaki Pref., 7. V. 1978, H. MAKIHARA leg.; 1♂1♀, Ishinami, Kushima-shi, Miyazaki Pref., 26. IV. 1993, C. OKUMA leg.; 1♀, Tarumizu, Tarumizu-shi, Kagoshima Pref., 30. VII. 1964, S. NAKAO leg.; 1♀, Nishinakama, Amami-ôshima Island, Kagoshima Pref., 24–26. V. 1978, H. MAKIHARA leg.; 1♀, Oyama, Okino-erabujima Island, Kagoshima Pref., 3. VII. 1974, H. MAKIHARA leg.; 1♀, Oku, 16. V. 1979, 1♀, Yona, 9–11, VII, 1977, 1♀, Mt. Yonahadake, 11–12. VII. 1977, 1♀, Oku 16, V. 1979, Okinawajima Island, Okinawa Pref., H. MAKIHARA leg.; 1♀, same Island, 27. IV. 1989, A. TANIKAWA leg.; 2♀♀, Mt. Omoto, Ishigakijima Island, Okinawa Pref., 20. VI. 1974, H. MAKIHARA leg.; 1♀, Hirakubo, same island, 28. V. 1975, H. MAKIHARA leg.; 1♀, Urauchi, 30. III. 1985, 1♀, Komi, 6. VIII. 1987, 1♂, Tsukigahama, 27. III. 1987, 1♂, Takana, 31. III. 1989, Iriomotejima Island, Okinawa Pref., A. TANIKAWA leg.; 1♀, Yonagunijima Island, Okinawa Pref., 10. IV. 1979, H. MAKIHARA leg.; 1♂, Kukuan, Taichung Hsien, Taiwan, 10. VI. 1976, H. MAKIHARA leg.; 1♀, T'ienkung-miao, near Tali, Ilan Hsien, Taiwan, 17. III. 1991, H. ONO leg. (NSMT-Ar 3123).

Distribution. Japan (Hokkaido, Honshu, Shikoku, Kyushu, S.W. Islands), Taiwan and Korea.

Note. This species is already well known in Japan.

Episinus chikunii YOSHIDA, 1985

(Fig. 2)

Episinus chikunii YOSHIDA, 1985, p. 25, figs. 1–8; CHIKUNI, 1989, p. 38 (fig. 41), 182.

Description. Measurement (in mm). Body length ♀5–6, ♂3–5; Length of legs of 1♀ and 1♂ from Nagano Pref. as shown in Table 3.

Male and female: Eye region somewhat projected anteriorly; eye markings of ALE, PLE and PME black and large, and confluent each other as shown in Fig. 2, B. Clypeus strongly concaved and projected anteriorly. Chelicerae with a very small tooth on anterior margin of fang furrow, without tooth on posterior margin. Leg formula ♀ 4. 1. 2. 3, ♂ 1. 4. 2. 3; legs comparatively robust, pale yellowish brown with brown bands or marks; hairs somewhat long and dense; all legs with a few dorsal spines on patella and tibia. Metatarsus: tarsus of the first leg=100: 36–38.

Specimens examined. Type series: Holotype: ♂, Mitsumata, Horigane-mura, Nagano Pref., 17. X. 1977, Y. CHIKUNI leg. (NSMT–Ar 851). Paratypes: 1♀, same data as holotype (NSMT–Ar 852), 1♀, same data as holotype.

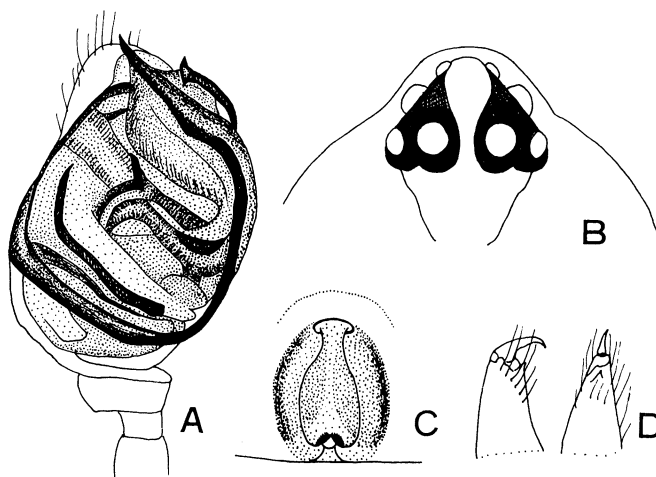


Fig. 2. *Episinus chikunii* YOSHIDA, 1985. A: Right palpus of male. B: Eye group of male. C: Epigynum. D: Right chelicera of female.

Table 3. Measurement of leg segments of *Episinus chikunii* YOSHIDA (in mm; ♀/♂).

| Leg | Femur | Patella + Tibia | Metatarsus | Tarsus | Total |
|-----|-----------|-----------------|------------|-----------|------------|
| I | 2.60/2.55 | 3.10/3.00 | 2.8/2.8 | 1.05/1.00 | 9.55/9.35 |
| II | 1.95/1.55 | 2.15/1.65 | 1.7/1.4 | 0.90/0.75 | 6.70/5.35 |
| III | 1.55/1.20 | 1.70/1.15 | 1.4/1.0 | 0.80/0.60 | 5.45/3.95 |
| IV | 2.90/2.30 | 3.10/2.30 | 2.8/2.2 | 1.25/1.00 | 10.05/7.80 |

Other specimens examined. 1♂, Sugadaira, Sanada-chô, Chiisagata-gun, Nagano Pref., 28. VII. 1980, A. TANIKAWA leg.; 1♂, Sarukura, Hakuba, Nagano Pref., 14. VII. 1973, K. ARIMA & H. ONO leg. (NSMT-Ar 3124).

Distribution. Japan (known only from Nagano Pref., Honshu).

Note. Male palpi of this species and those of *E. kitazawai* are very similar to those of European *Episinus angulatus* and *E. truncatus*, but they are easily separable from each other in the shape of epigynum.

***Episinus kitazawai* YAGINUMA, 1958**

(Fig. 3)

Episinus kitazawai YAGINUMA, 1958, p. 75, figs. 23–26; YOSHIDA, 1985, p. 27, figs. 21–23; YAGINUMA, 1986, p. 47, fig. 25 (3), pl. 11 (3); CHIKUNI, 1989, p. 38 (fig. 42), 181; ONO *et al.*, 1991, p. 84.

Description. Measurement (in mm). Body length ♀4–5, ♂3–4. Length of legs of 1♀ from Oita Pref. and 1♂ from Yamagata Pref. as shown in Table 4.

Male and female: Eye region of carapace projected anteriorly; eye markings of ALE, PLE and PME black and large, and confluent each other as shown in Fig. 3, B. Clypeus strongly concaved and projected anteriorly. Chelicerae without tooth on both margins of fang furrow. Leg formula ♀ 4. 1. 2. 3, ♂ 1. 4. 2. 3; legs comparatively robust; first femur almost dusky brown, others yellowish brown with dusky brown bands or marks; hairs somewhat long and dense; all legs with a few dorsal spines on patella and tibia. Metatarsus: tarsus of the first leg=100: 36–38.

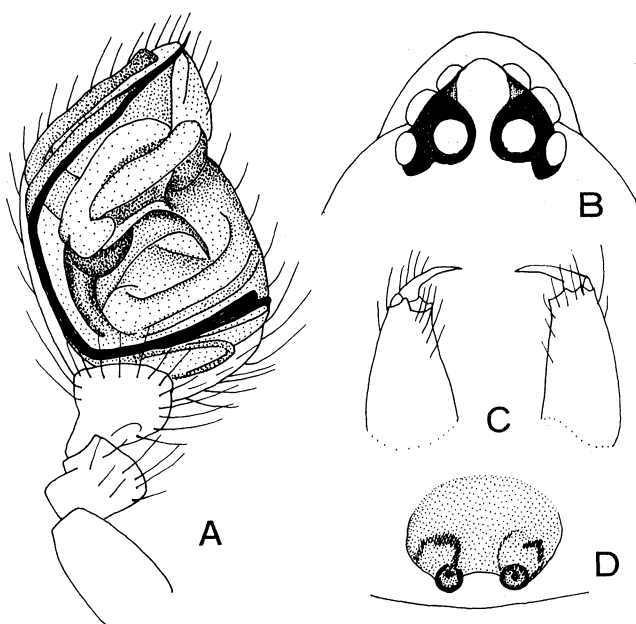


Fig. 3. *Episinus kitazawai* YAGINUMA, 1958. A: Left palpus of male. B: Eye group of female. C: Right chelicera of female. D: Epigynum.

Table 4. Measurement of leg segments of *Episinus kitazawai* YAGINUMA (in mm; ♀/♂).

| Leg | Femur | Patella + Tibia | Metatarsus | Tarsus | Total |
|-----|----------|-----------------|------------|----------|------------|
| I | 1.9/2.80 | 2.20/3.2 | 1.95/3.15 | 0.8/1.10 | 6.85/10.25 |
| II | 1.4/1.70 | 1.45/1.8 | 1.10/1.50 | 0.6/0.75 | 4.55/ 5.75 |
| III | 1.1/1.20 | 1.15/1.3 | 0.85/1.05 | 0.6/0.60 | 3.70/ 4.15 |
| IV | 2.1/2.45 | 2.20/2.6 | 1.90/2.40 | 0.9/1.00 | 7.10/ 8.45 |

Specimens examined. 1♀, Oshidomari, 30–400 mdt, Rishiritô Island, Hokkaido, 8. VII. 1984, N. TSURUSAKI leg.; 1♀, Yamabe, Furano-shi, Hokkaido, 9. VIII. 1981, A. TANIKAWA leg.; 1♂, Kurasawa, Asahi-mura, Higashitagawa-gun, Yamagata Pref., 9. VI. 1990, H. YOSHIDA leg.; 1♀, Kusatu, Agatsuma-gun, Gunma Pref., 14. VIII. 1979, M. MORI leg.; 4♀♀, Mt. Sobosan, Taketa-shi, Oita Pref., 21–26. VII. 1964, C. OKUMA leg.

Distribution. Japan (Hokkaido, Honshu and Kyushu).

Episinus makiharai sp. nov.

(Fig. 4)

Description. Measurement (in mm): ♂, holotype; ♀, paratypes. Body length ♀ 4.5–6.0, ♂ 3.7; carapacial length ♀ 1.6, ♂ 1.3, width ♀ 1.3–1.5, ♂ 1.2; abdominal

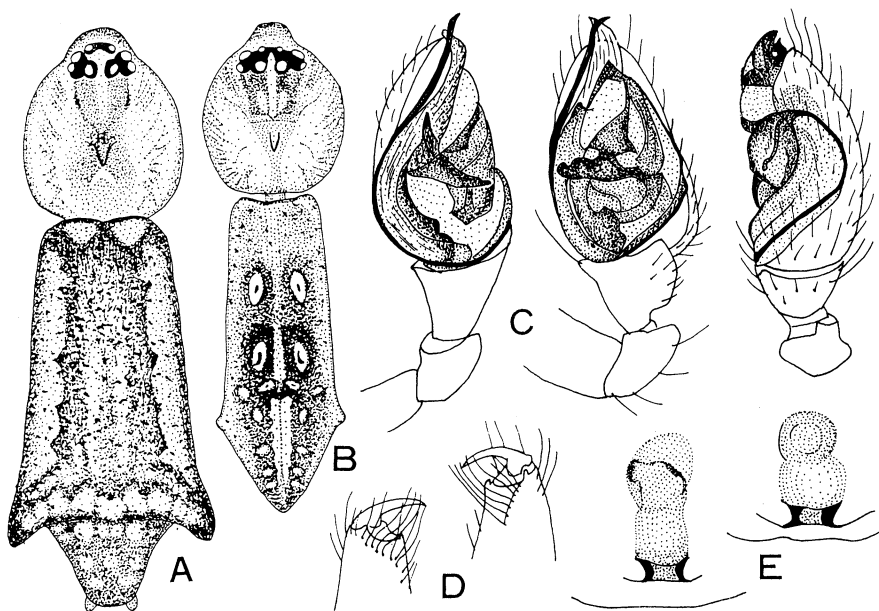


Fig. 4. *Episinus makiharai* sp. nov. A: Female, dorsal view. B: Male, dorsal view. C: Left palpus of male. D: Left chelicera of female. E: Epigynum.

Table 5. Measurement of leg segments of *Episinus makiharai* new species (in mm; ♀/♂).

| Leg | Femur | Patella + Tibia | Metatarsus | Tarsus | Total |
|-----|-----------|-----------------|------------|-----------|-----------|
| I | 2.50/2.95 | 2.80/3.10 | 2.65/3.15 | 0.65/0.75 | 8.60/9.95 |
| II | 1.80/1.80 | 1.80/1.75 | 1.55/1.50 | 0.65/0.65 | 5.80/5.70 |
| III | 1.35/1.30 | 1.35/1.25 | 1.15/1.05 | 0.60/0.55 | 4.45/4.15 |
| IV | 3.00/2.85 | 2.90/2.80 | 2.90/3.00 | 0.85/0.95 | 9.65/9.60 |

length ♀ 3.0–4.5, ♂ 2.45, width ♀ 1.7–2.8, ♂ 1.0. Length of legs of 1♀ paratype and holotype ♂ as shown in Table 5.

Male: Carapace yellowish brown with many dusky flecks, longer than wide; eye region slightly roundly elevated; eye markings of ALE, PLE and PME black and large, and confluent each other as shown in Fig. 4, B; AME smaller than the others; ALE somewhat larger than PME or PLE. Clypeus projected anteriorly. Chelicera small, anterior margin of fang furrow with a small tooth, posterior margin without tooth. Sternum dusky brown. Legs yellowish brown with dusky marks, and with many bristle-like rough hairs on femora and metatarsi; usually two dorsal spines on patellae and tibiae of all legs. Leg formula 1. 4. 2. 3 (female 4. 1. 2. 3). Metatarsus: tarsus of the first leg=100: 23–25. Male palpus as shown in Fig. 4, C. Abdomen pale dusky brown with many blackish flecks dorsally and ventrally, spinnerets somewhat reddish.

Female: Similar to male. Epigynum as shown in Fig. 4, E.

Specimens examined. Holotype: ♂, 27–29. V. 1980, Lushan Wench'uan, Nant'ou Hsien Taiwan, H. MAKIHARA leg. (NSMT-Ar 3103). Paratypes: 1♂2♀♀, 22–23, V. 1980, Ssülêng, Taoyuan Hsien, Taiwan, H. MAKIHARA leg.; 1♀, same data as holotype; 1 paratopotype ♀, 7. VI. 1976, H. MAKIHARA leg. (NSMT-Ar 3104).

Type depository. The holotype and 1♀ paratopotype are preserved in the collection of the National Science Museum (Natural History), Tokyo.

Distribution. Taiwan.

Note. This new species is similar to *E. affinis* in many respects, but is easily separable from the latter in the unique shape of abdomen in both sexes; male palpus and epigynum are also characteristic in this species.

This species is named after Mr. H. MAKIHARA, the collector of the specimens examined.

Episinus nubilus YAGINUMA, 1960

(Fig. 5)

Episinus nubilus YAGINUMA, 1960, p. 3, fig. 101 (E), p. 39, fig. 38, pl. 11 (fig. 66); YAGINUMA, 1970, p. 648; YOSHIDA, 1985, p. 27, fig. 14; YAGINUMA, 1986, p. 46, fig. 25 (2), pl. 11 (fig. 2); CHIKUNI, 1989, p. 38 (fig. 40), 181; KUMADA, 1989, p. 39, figs. 1–5.

Episinus bicornutus YOSHIDA, 1983, p. 76, fig. 11 (holotype male); SEO, 1985, p. 97, figs. 1–4.

Description. Measurement (in mm). Body length ♀ 4–5, ♂ 3–4. Length of legs of 1♀ from Oita Pref. and 1♂ from Kagoshima Pref. as shown in Table 6.

Male and female: Eye region projected anteriorly; eye markings of ALE, PLE

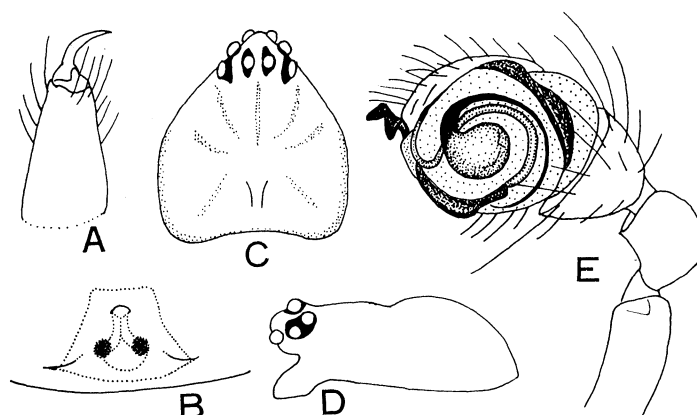


Fig. 5. *Episinus nubilus* YAGINUMA, 1960. A: Right chelicera of female. B: Epigynum. C: Carapace of female, dorsal view. D: Ditto, lateral view. E: Left palpus of male.

Table 6. Measurement of leg segments of *Episinus nubilus* YAGINUMA (in mm; ♀/♂).

| Leg | Femur | Patella + Tibia | Metatarsus | Tarsus | Total |
|-----|-----------|-----------------|------------|-----------|-----------|
| I | 1.95/1.90 | 2.40/2.10 | 1.9/1.8 | 0.60/0.55 | 6.85/6.35 |
| II | 1.45/1.35 | 1.45/1.35 | 1.1/1.1 | 0.55/0.55 | 4.55/4.35 |
| III | 1.00/1.05 | 1.00/1.10 | 0.8/0.8 | 0.55/0.50 | 3.35/3.45 |
| IV | 2.05/2.15 | 2.25/2.20 | 2.2/2.2 | 0.70/0.75 | 7.20/7.30 |

and PME black. Clypeus strongly concaved and somewhat projected anteriorly. Chelicerae without tooth on both margins of fang furrow. Leg formula ♀♂ 4. 1. 2. 3; legs pale yellowish brown with dusky bands, and with somewhat long and rough hairs; all legs with a few dorsal spines on each patella and tibia. Metatarsus: tarsus of the first leg=100: 30–32. Male palpus as shown in Fig. 5, E; embolus large and coiled around bulb.

Specimens examined. 1♂, Kamo, Tsuruta-shi, Yamagata Pref., 28. VII. 1990, H. YOSHIDA leg.; 1♀, Satomura, Mikurajima Island, Tokyo, 11. VII. 1970, H. ONO leg. (NSMT–Ar 3125); 1 gynandromorpha, Iwa, Manazuru-chô, Ashigara-shimo-gun, Kanagawa Pref., 30. VII. 1988, K. KUMADA et S. INABA leg. (NSMT–Ar 1270); 1♀, Ishihama, Higasiura-chô, Chita-gun, Aichi Pref., 16. VII. 1993, T. NOHIRA leg.; 1♀, Minoo, Minoo-shi, Osaka Pref., 18. VI. 1967, T. YAGINUMA leg. (ARANEIDA T. YAGINUMA No. 18–23); 1♂, Okuichi, Okayama-shi, Okayama Pref., 25. VIII. 1991, A. TANIKAWA leg.; 1♀, Onomichi-shi, Hiroshima Pref., 23. IX. 1992, A. TANIKAWA leg.; 1♂, Mt. Gokayama, Chikushi-gun, Fukuoka Pref., 26. VII. 1953, C. OKUMA leg.; 9♂♂, 8–14. VII, 2♂♂1♀, 22–28. VII, 5♂♂, 30. VII–5. VIII, 3♂♂, 12–18. VIII, 6♂♂2♀♀, 26. VIII–1. IX, 1♂1♀ & 5 juvs., 16–24. IX. 1979, Mt. Tachibanayama, Fukuoka-shi, Fukuoka Pref., K. YAMAGISHI leg.; 1♂1♀, Shinyashiki, Onga-gun, Fukuoka Pref., 28. VIII. 1981, C. OKUMA leg.; 1♀, Mt. Sobosan, Taketa-shi, Oita

Pref., 21–26. VII. 1964, C. OKUMA leg.; 1♂1♀, Izuhara, Tsushima Island, Nagasaki Pref., 12–15. VI. 1979, T. GOTÔ et K. OGATA leg.; 1♂, Kujukawa, Yakushima Island, Kagoshima Pref., 17. VII. 1990, A. TANIKAWA leg.; 1♀, Shirahama, 11. VIII. 1985, 1♂, Otomi, 25. XII. 1991, Iriomote Island, Okinawa Pref., A. TANIKAWA leg.

Distribution. Japan (Hokkaido, Honshu, Shikoku, Kyushu and S.W. Islands), Korea and China.

Note. This species is already well known in Japan.

***Episinus punctisparsus* YOSHIDA, 1983**

(Fig. 6)

Episinus punctisparsus YOSHIDA, 1983, p. 75, figs. 7–8.

Description. Measurement (in mm): 1♂, female unknown. Body length 3.5. Length of legs from Tayulin as shown in Table 7.

Male: Eye region somewhat roundly elevated, eye markings of ALE, PLE and PME black and large, and confluent each other as shown in Fig. 6, A. Abdomen longer than wide with dusky marks. Chelicerae with a very small tooth on anterior

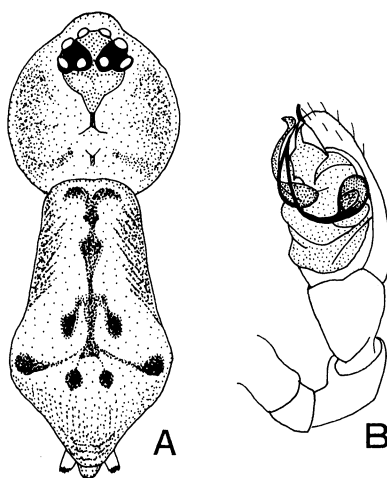


Fig. 6. *Episinus punctisparsus* YOSHIDA, 1983. A: Male, dorsal view. B: Left palpus of male.

Table 7. Measurement of leg segments of *Episinus punctisparsus* YOSHIDA (in mm; ♂).

| Leg | Femur | Patella + Tibia | Metatarsus | Tarsus | Total |
|-----|-------|-----------------|------------|--------|-------|
| I | 2.75 | 3.00 | 3.05 | 0.7 | 9.50 |
| II | 1.60 | 1.75 | 1.55 | 0.6 | 5.50 |
| III | 1.30 | 1.25 | 1.05 | 0.5 | 4.10 |
| IV | 2.55 | 2.60 | 2.60 | 0.8 | 8.55 |

margin of fang furrow. Leg formula 1. 4. 2. 3; all legs pale yellowish brown with dusky marks or bands, and with somewhat long and rough hairs; all legs with a few dorsal spines on each patella and tibia. Metatarsus: tarsus of the first leg=100: 23. Palpus shown in Fig. 6, B.

Specimens examined. Type series: Holotype: ♂, Mt. Alishan, Chia Yi County, Taiwan, 10. VII. 1977, M. YOSHIMURA leg.

Other specimens examined. 1♂, Tayulin, Hualien Hsien, Taiwan, 22. VI. 1976, H. MAKIHARA leg.

Distribution. Taiwan.

***Episinus yoshidai* sp. nov.**

(Fig. 7)

Episinus bicornutus YOSHIDA, 1983, p. 76, figs. 9–10 (partim: only female based on the paratype 1♀).

Episinus nubilus: YOSHIDA, 1985, p. 28 (♀).

The species which was described as *Episinus bicornutus* (the holotype is ♂) by YOSHIDA (1983) is a synonym of *Episinus nubilus* YAGINUMA, 1960. However, YOSHIDA mixed up two species in his *bicornutus*. According to my present study, females of *bicornutus* YOSHIDA is recognized as a new species as described herein under the name of *Episinus yoshidai*.

Description. Measurement (in mm): Holotype ♂: Body length 4.2; carapacial length 1.8, width 1.7; abdominal length 2.4, width 2.8. Other specimens: 2♀♀: Body length 4.1–4.6; carapacial length 1.5–1.7, width 1.4–1.5; abdominal length 2.7–3.0, width 2.2–2.5. Length of legs of 1♂ (holotype) and 1♀ from Anma-shan as shown in Table 8.

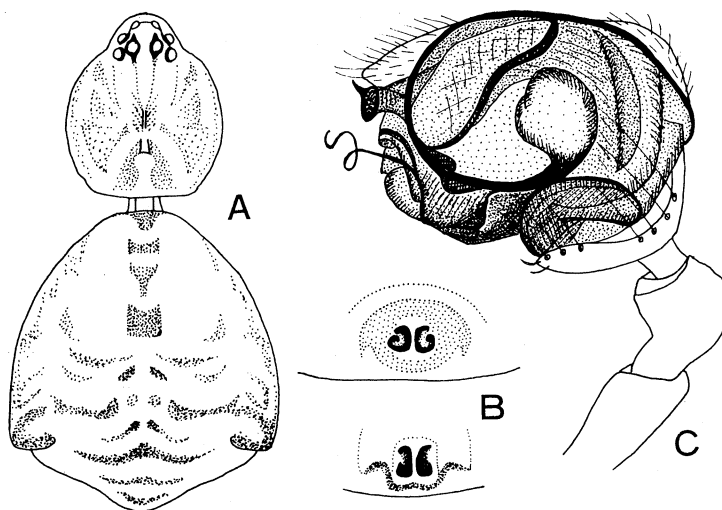


Fig. 7. *Episinus yoshidai* sp. nov. A: Female, dorsal view. B: Epigynum. C: Left palpus of male.

Table 8. Measurement of leg segments of *Episinus yoshidai* sp. nov. (in mm; ♀/♂).

| Leg | Femur | Patella + Tibia | Metatarsus | Tarsus | Total |
|-----|-----------|-----------------|------------|-----------|-----------|
| I | 1.80/2.15 | 2.05/2.65 | 1.80/2.0 | 0.65/0.70 | 6.30/7.50 |
| II | 1.35/1.70 | 1.40/1.80 | 1.00/1.3 | 0.60/0.60 | 4.35/5.40 |
| III | 1.00/1.20 | 1.10/1.13 | 0.75/1.0 | 0.50/0.55 | 3.35/4.05 |
| IV | 2.10/2.30 | 2.30/2.50 | 1.95/2.3 | 0.80/0.85 | 7.15/7.95 |

Male holotype: Eye region projected anteriorly; eye markings of ALE, PLE and PME black. Clypeus strongly concaved and projected anteriorly. Chelicerae without tooth on both margins of fang furrow. Leg formula 4. 1. 2. 3; legs pale yellowish brown with dusky marks, and with dense, somewhat long hairs; all legs with a few dorsal spines on each patella and tibia. Metatarsus: tarsus of the first leg=100: 35. Male palpus large, well developed as shown in Fig. 7, C; bulb of embolus slightly coiled.

Female: Similar to male. Epigynum as shown in Fig. 7, B.

Specimens examined. Holotype: ♂, Anma-shan, 2,230 m alt., Taichung Hsien, Taiwan, 19. X. 1989, H. ONO leg. (NSMT-Ar 3105). Paratypes: 1♀, Anma-shan, 2,050 m alt., Taichung Hsien, Taiwan, 20. X. 1989, H. ONO leg. (NSMT-Ar 3106); 1♀, Meifeng, Nant'ou Hsien, Taiwan, 29. V. 1980, H. MAKIHARA leg.

Type depository. The holotype is preserved in the collection of the National Science Museum (Natural History), Tokyo.

Distribution. Taiwan.

Note. This species is very similar to *E. nubilus* but is separable from the latter in the structure of male palpus and the shape of epigynum. This species is named after Mr. H. YOSHIDA who described a female specimen of this new species under the name of *Episinus bicornutus*. It was regarded as a synonym of *Episinus nubilus* YAGINUMA, 1960, by himself (YOSHIDA, 1985). Because the holotype of *E. bicornutus* was a male, the synonymy was valid. However, the pairing in the original description was not correct as recognized in the present paper.

Genus *Moneta* O. P.-CAMBRIDGE

Moneta O. P.-CAMBRIDGE, "1870" 1871, Proc. Zool. Soc. London, p. 736. Type species: *M. spiniger* O. P.-CAMBRIDGE, 1870, *op. cit.*, pl. 44 (fig. 5), ♀, from Ceylon.

Hyptimorpha STRAND, 1906, Abh. senckenberg. naturf. Ges., 30, p. 135. Type species: *H. mirabilis* BÖSENBERG et STRAND, 1906, *op. cit.*, p. 136, pl. 11 (fig. 227), ♀, from Japan.

Description. Eye region almost straight laterally and two rows of eyes parallel; eye markings indistinct, very small or pale. Chelicerae small, with two teeth on anterior margin of fang furrow, with a tooth on posterior margin. Male palpus extremely complex; usually with a lateral projection (paracymbial hook?) on margin of cymbium. Leg formula 1. 4. 2. 3; all legs usually without spines or bristles except "serrated bristles" on the fourth legs; usually pale yellow to brown, without flocks or marks, with short, weak and sparse hairs; tarsus very short. Metatarsus: tarsus of the first leg=100: 6-15.

***Moneta caudifer* (DÖNITZ et STRAND, 1906), comb. nov.**

(Fig. 8)

Episinus caudifer DÖNITZ et STRAND, in BÖSENBERG et STRAND, 1906, p. 379, pl. 4 (fig. 39); SAITO, p. 197, fig. 231; YAGINUMA, 1970, p. 648.

Episinus paiki SEO, 1985, p. 98, figs. 5–9 (new synonymy).

Episinus mirabilis: YOSHIDA, 1985, p. 27, fig. 18; YAGINUMA, 1986, p. 47, fig. 25; CHIKUNI, 1989, p. 38 (fig. 43), 182; ONO *et al.*, 1991: 84.

Episinus caudifer DÖNITZ et STRAND was treated as a synonym of *Episinus mirabilis* BÖSENBERG et STRAND by YOSHIDA (1985), but the former is a good species. *Episinus caudifer* is transferred to the genus *Moneta* in this paper. *Episinus paiki* SEO was synonymized with *E. mirabilis* by YOSHIDA (1985), but it should be regarded as a synonym of *E. caudifer*.

Description. Measurement (in mm). Body length ♀ 3.5–4.0, ♂ 2.8–3.1. Length of legs of 1♀ from Fukuoka Pref. and 1♂ from Gifu Pref. as shown in Table 9.

Male and female: Carapace pale yellowish brown with dusky marginal strips, slightly longer than wide; AME smaller than the others; ALE and PLE nearly confluent each other and somewhat projected laterally; eye markings small and pale. Clypeus flat and projected anteriorly. Chelicera small, anterior margin of fang furrow with two small teeth, posterior margin with a small tooth. Male palpus with a large lateral projection on margin of cymbium. Leg formula 1. 4. 2. 3; all legs slender; pale yellowish brown without any marks or bands; with weak, sparse

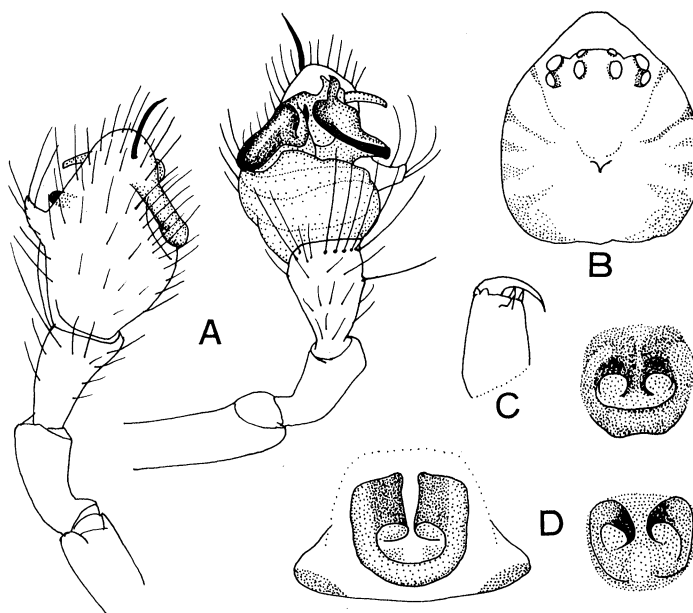


Fig. 8. *Moneta caudifer* (DÖNITZ et STRAND, 1906). A: Left palp of male. B: Carapace of female, dorsal view. C: Right chelicera of female. D: Epigynum.

Table 9. Measurement of leg segments of *Moneta caudifer* (DÖNITZ et STRAND) (in mm; ♀/♂).

| Leg | Femur | Patella + Tibia | Metatarsus | Tarsus | Total |
|-----|-----------|-----------------|------------|-----------|-----------|
| I | 2.15/2.25 | 1.9/2.0 | 2.10/2.0 | 0.30/0.30 | 6.45/6.55 |
| II | 1.4 /1.45 | 1.5/1.5 | 1.30/1.3 | 0.20/0.20 | 4.40/4.45 |
| III | 0.75/0.80 | 0.9/0.9 | 0.70/0.7 | 0.20/0.20 | 2.55/2.60 |
| IV | 2.00/1.80 | 1.7/1.8 | 1.95/1.8 | 0.35/0.35 | 6.00/5.75 |

hairs, without spines or bristles except serrated bristles on fourth legs; tarsi very short. Metatarsus: tarsus of the first leg=100: 13–15.

Specimens examined. 1♀, Midô, Iwate-machi, Iwate-gun, Iwate Pref. 20. VI. 1975, K. YAMAGISHI leg.; 1♂1♀, Daitake, Tanzawa, Hadano-shi, Kanagawa Pref., 5. VI. 1989, K. KUMADA leg. (NSMT-Ar 1929, labeled *E. mirabilis*); 1♂, Tsukimino, Yamato-shi, Kanagawa Pref., 23. V. 1993, TANIKAWA leg.; 1♂, Shinhotaka-onsen, Gifu Pref., 10–12. VI. 1980, S. NAOMI leg.; 2♂♂10♀♀, Mt. Iwakiyama, Kawachinagano-shi, Osaka Pref., 17. VI. 1978, H. YOSHIDA leg.; 2♀♀, Mt. Hikosan, Tagawa-gun, Fukuoka Pref., VII. 1958, S. MIYAMOTO leg.; 1♀, same locality, 2. VIII. 1958, C. OKUMA leg.

Distribution. Japan (Hokkaido, Honshu, Shikoku, and Kyushu).

Note. This species is very similar to *Moneta mirabilis* (BÖS. et STR.) but is separable from the latter in the shape of male palpus and epigynum.

***Moneta mirabilis* (BÖSENBERG et STRAND, 1906), comb. nov.**

(Fig. 9)

Hyptimorpha mirabilis BÖSENBERG et STRAND, 1906, p. 136, pl. 11 (fig. 227); SAITO, 1941, p. 167, fig. 189; LEVI & LEVI, 1962, p. 55, figs. 224–225.

So far as I know, the spiders of *Episinus mirabilis* determined by Japanese authors are not *Episinus mirabilis* but *Episinus caudifer*. *Episinus mirabilis* was described based on a female specimen taken in Saga. The second specimen (1♀) of this species was collected by me in Miyazaki 87 years later from its original description. This species is transferred to the genus *Moneta* in this paper.

Description. Measurement (in mm): Holotype ♀ (damaged): Carapacial length 1.7, width 1.6–1.7 (?). Length of legs of holotype as shown in Table 10. Other

Table 10. Measurement of leg segments of *Moneta mirabilis* (BÖSENBERG et STRAND) (in mm; ♀).

| Leg | Femur | Patella + Tibia | Metatarsus | Tarsus | Total |
|-----|-------|-----------------|------------|--------|-------|
| I | 3.5 | 3.10 | 3.25 | 0.30 | 10.15 |
| II | 2.3 | 2.50 | 2.20 | 0.20 | 7.20 |
| III | 1.0 | 1.25 | 1.10 | 0.25 | 3.60 |
| IV | 3.0 | 2.55 | 3.15 | 0.40 | 9.10 |

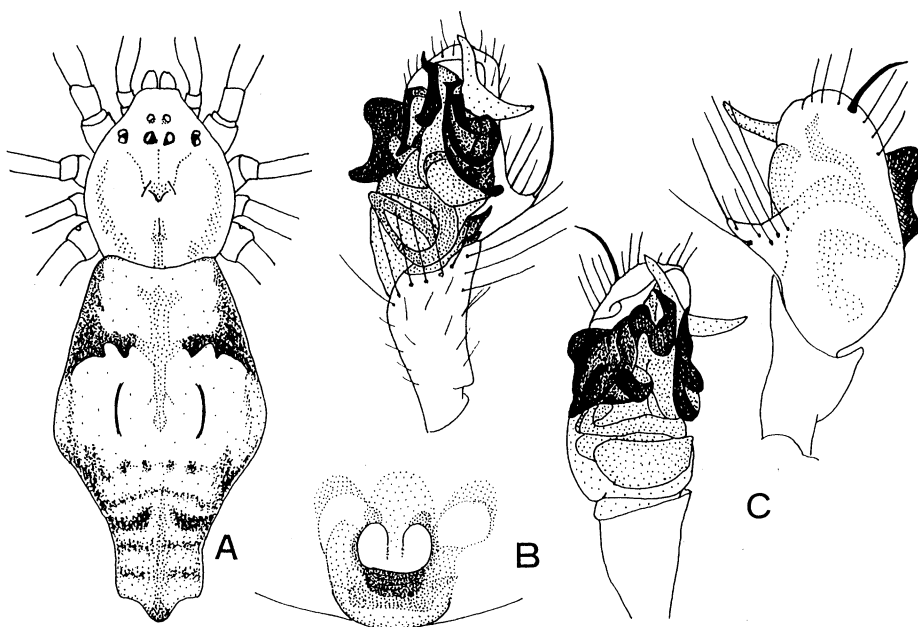


Fig. 9. *Moneta mirabilis* (BÖSENBERG et STRAND, 1906). A: Female, dorsal view. B: Epigynum. C: Left palpus of male.

Table 11. Measurement of leg segments of *Moneta mirabilis* (BÖSENBERG et STRAND) (in mm; ♀/♂).

| Leg | Femur | Patella + Tibia | Metatarsus | Tarsus | Total |
|-----|-----------|-----------------|------------|-----------|------------|
| I | 4.40/4.30 | 3.9/3.9 | 3.9/4.15 | 0.27/0.25 | 12.47/12.6 |
| II | 2.80/2.60 | 3.1/2.7 | 2.7/2.40 | 0.22/0.20 | 8.82/7.90 |
| III | 1.35/1.25 | 1.4/1.3 | 1.3/1.15 | 0.20/0.20 | 4.25/3.90 |
| IV | 3.70/2.90 | 3.1/2.5 | 3.8/3.20 | 0.38/0.30 | 10.98/8.90 |

specimens: Body length ♀ 5–6, ♂ 4.9; carapacial length ♀ 1.7–2.0, ♂ 1.7, width ♀ 1.6–1.85, ♂ 1.45; abdominal length ♀ 3.5–4.1, ♂ 3.2, width ♀ 2.0–2.9, ♂ 1.45. Length of legs of 1♀ from Miyazaki Pref. and 1♂ from Kukuan, Taiwan as shown in Table 11.

Female from Miyazaki Pref.: Carapace pale yellowish brown with dusky marginal strips, slightly longer than wide; AME smaller than the others; ALE and PLE nearly touched each other and somewhat projected laterally; eye markings small, pale reddish brown. Clypeus flat and projected anteriorly. Chelicera small; anterior margin of fang furrow with two small teeth, posterior margin with a small tooth. Abdomen pale yellowish brown with blackish markings and covered with many small reddish white spangles dorsally; middle of venter dusky brown; epigynum as shown in Fig. 9, B. Leg formula 1. 4. 2. 3; all femora pale yellowish brown;

tibiae, metatarsi and tarsi of 1st and 2nd legs pale yellowish brown and somewhat pale dusky brown distally; all patellae, and tibiae, metatarsi and tarsi of 3rd and 4th legs pale dusky brown; all legs with short hairs, without spines or bristles except serrated bristles on fourth legs; tarsi very short. Metatarsus: tarsus of the first leg=100: 6.9.

Other specimens from Taiwan: Coloration somewhat variable, but generally similar to the above. Male palpus extremely complex, with a large lateral projection on margin of cymbium. Metatarsus: tarsus of the first leg=100: 6.0–9.0.

Specimen examined. Holotype: ♀, 1882, Saga, Japan, W. DÖNITZ leg. (SMF 3829).

Other specimens examined. 1♀, Ishinami, Kushima-shi, Miyazaki Pref., 26. IV. 1993, C. OKUMA leg; 1♂1♀, Kukuan, Taichung Hsien, Taiwan, 10. VI. 1976, H. MAKIHARA leg.; 1♀, Hungt'ou, Lanhsu, Taitung Hsien, Taiwan, 4. VI. 1980, H. MAKIHARA leg.

Distribution. Japan (Kyushu) and Taiwan.

Note. This is the first record of this species from Taiwan.

Moneta spiniger O. P.-CAMBRIDGE, 1870

(Fig. 10)

Moneta spiniger O. P.-CAMBRIDGE, 1870, p. 736, pl. 44 (fig. 5); SIMON 1894, p. 512; BERLAND 1920, p. 147, fig. 173; H. W. and L. R. LEVI, 1962, p. 54, figs. 228–230.

Episinus spiniger: YOSHIDA, 1978, p. 21; YOSHIDA, 1983, p. 74.

Description. Measurement (in mm): Body length ♀ 3–5, ♂ 2.6; carapacial length ♀ 1.0–1.7, ♂ 0.92, width ♀ 0.9–1.5, ♂ 0.8; abdominal length ♀ 2.2–3.0, ♂ 1.7, width ♀ 1.7–1.9, ♂ 0.86. Length of legs of 1♀ from Meifeng, Taiwan and 1♂ from Shuishe, Taiwan as shown in Table 12.

Male and female: Carapace yellowish brown to brown, dusky marginally. AME smaller than the others; ALE and PLE nearly touched each other and projected laterally; eye markings pale brown or scarcely pigment. Clypeus flat and projected anteriorly. Chelicera small; anterior margin of fang furrow with two small teeth, posterior margin with a small tooth. Male palpus with small lateral projection on margin of cymbium. Leg formula 1. 4. 2. 3; all legs slender; generally pale yellowish brown, and all patellae and 3rd legs somewhat dusky; with short, weak and sparse hairs, without spines or bristles except serrated bristles on fourth legs; tarsi very short. Metatarsus: tarsus of the first leg=100: 10–14. Abdomen

Table 12. Measurement of leg segments of *Moneta spiniger* O. P.-CAMBRIDGE (in mm; ♀/♂).

| Leg | Femur | Patella + Tibia | Metatarsus | Tarsus | Total |
|-----|-----------|-----------------|------------|-----------|-----------|
| I | 3.20/1.80 | 2.65/1.70 | 2.90/1.65 | 0.28/0.20 | 9.03/5.35 |
| II | 1.85/1.08 | 2.00/1.15 | 1.80/1.00 | 0.20/0.18 | 5.85/3.41 |
| III | 0.95/0.60 | 1.00/0.62 | 0.95/0.45 | 0.20/0.22 | 3.10/1.89 |
| IV | 2.60/1.30 | 1.90/1.18 | 2.65/1.20 | 0.35/0.26 | 7.50/3.84 |

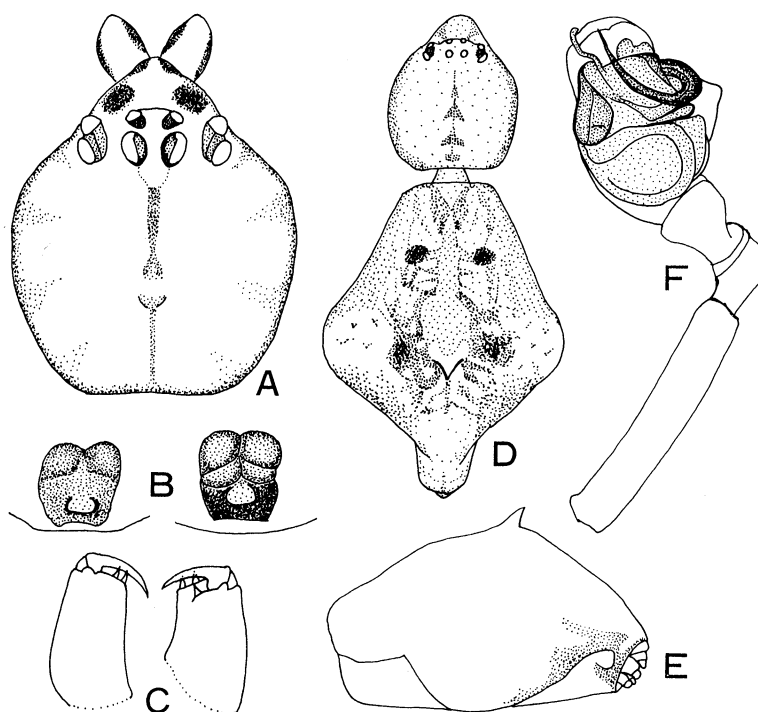


Fig. 10. *Moneta spiniger* O. P.-CAMBRIDGE, 1870. A: Carapace of male, dorsal view. B: Epigynum. C: Left chelicera of female. D: Female, dorsal view. E: Abdomen of female, lateral view. F: Left palpus of male.

with a small dorso-medial nipple-like tubercle as shown in Fig. 10, E.

Specimens examined. 1♀, Lushan Wench'uan, Nant'ou Hsien, 7. VI. 1976, 1♀, Kenting Park, Pintung Hsien, 16. VI. 1976, 1♀, Ssülêng, T'aoyuan Hsien, 22. V. 1980, 1♀, Meifeng, Nant'ou Hsien, 29. V. 1980, all collected by H. MAKIHARA; 3♂1♀ & 4 juvs., Shuishe, Nantou Hsien, 27. III. 1979, H. YOSHIDA leg.; 1♀, Jihyueh-t'an, Tehuashe, 850 m alt., Nantou Hsien, 3. III. 1991, H. ONO leg. (NSMT-Ar 3126); 1♀, Ssülêng, 1,300 m alt., T'aoyuan Hsien, 22. III. 1991, A. SHINOHARA leg. (NSMT-Ar 3127), all in Taiwan.

Distribution. Taiwan, Sumatra, India, Ceylon, Seychelles, Transvaal, East Africa and Gabon.

***Moneta tanikawai* (YOSHIDA, 1991), comb. nov.**

(Fig. 11)

Episinus tanikawai YOSHIDA, 1991, p. 7.

Description. Measurement (in mm). Body length ♀ 4–5, ♂ 3.8–4.0; carapacial length ♀ 1.4–1.6, ♂ 1.4–1.5, width ♀ 1.2–1.3, ♂ 1.2–1.3; abdominal length ♀ 2.5–3.0, ♂ 2.5, width ♀ 1.4–1.85, ♂ 1.2–1.3. Length of legs of 1♀ from Mt. Omoto

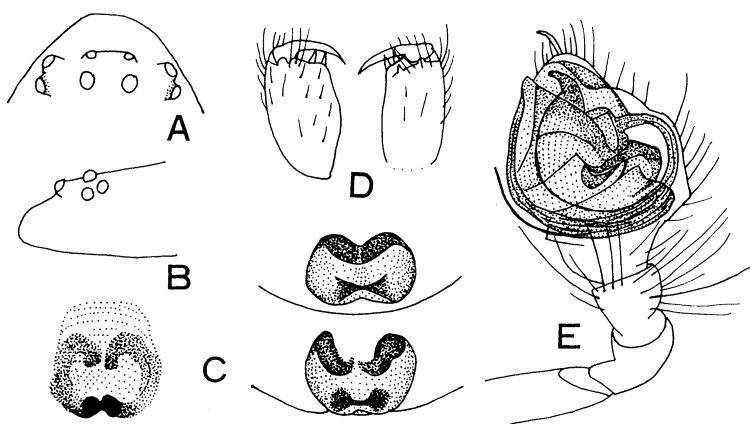


Fig. 11. *Moneta tanikawai* (YOSHIDA, 1991). A: Eye group of female, dorsal view. B: Ditto, lateral view. C: Epigynum. D: Left chelicera of male. E: Left palpus of male.

Table 13. Measurement of leg segments of *Moneta tanikawai* (YOSHIDA) (in mm; ♀/♂).

| Leg | Femur | Patella + Tibia | Metatarsus | Tarsus | Total |
|-----|----------|-----------------|------------|-----------|-----------|
| I | 3.35/3.2 | 3.2/3.00 | 3.20/3.05 | 0.23/0.25 | 9.98/9.50 |
| II | 2.15/2.0 | 2.3/2.20 | 1.90/1.80 | 0.20/0.20 | 6.55/6.20 |
| III | 1.08/1.0 | 1.1/1.00 | 1.00/0.98 | 0.20/0.20 | 3.38/3.18 |
| IV | 2.40/2.2 | 2.1/1.95 | 1.35/2.30 | 0.30/0.30 | 7.15/6.75 |

and 1♂ from Otomi, 28. III. 1986 as shown in Table 13.

Male and female: Carapace oval, slightly longer than wide; eye region almost straight laterally, lateral eyes nearly touched each other; eye markings small and pale. Clypeus flat and projected anteriorly. Chelicera small; anterior margin of fang furrow with two small teeth, posterior margin with a small tooth. Male palpus with small lateral projection on margin of cymbium. Leg formula 1. 4. 2. 3; all legs slender; pale yellowish brown, without any marks or bands; with weak, sparse hairs, without spines or bristles except serrated bristles on fourth legs; tarsi very short. Metatarsus: tarsus of the first leg=100: 7.0–9.0.

Specimens examined. 1♀, Oku, 30. VI. 1976, 1♀, Oku, 4. IV. 1979, 2 ♂♂, Mt. Yonahadake, 11–12. VIII. 1977, 1♂, Mt. Yonahadake 5. IV. 1979, all Okinawa-jima Island, 1♂, Mt. Omoto, Ishigaki Island, all Okinawa Pref., H. MAKIHARA leg.; 1♂1juv., 11. VIII. 1985, 1♂1♀, 30. XII. 1986, 1♀, 27. XII. 1987. 2♀♀, 2. I. 1989, 1♀, 28. XII. 1989, all Iriomotejima Island, Okinawa Pref., A. TANIKAWA leg.

Distribution. Japan (S.W. Islands.)

Note. This species is very similar to *E. yoshimurai* in the appearance, but is easily separable from the latter in the shape of the male palpus.

***Moneta yoshimurai* (YOSHIDA, 1983), comb. nov.**

(Fig. 12)

Episinus yoshimurai YOSHIDA, 1983, p. 75, figs. 5–6; YOSHIDA, 1985, p. 28, figs. 16–17; YOSHIDA, 1991, p. 9.

Description. Measurement (in mm): Paratype ♂: Body length 3.2; carapacial length 1.15, width 1.08; abdominal length 2.05, width 1.15. Length of legs as shown in Table 14.

Male: Carapace pale yellow; slightly longer than wide. Lateral eyes somewhat projected laterally; eye markings not visible. Clypeus projected anteriorly. Chelicera small; anterior margin of fang furrow with two small teeth, posterior margin with a small tooth. Male palpus complex; with a lateral projection on margin of cymbium. Leg formula 1. 4. 2. 3; all legs slender; pale yellow, without any marks or bands; with weak, sparse hairs, without spines or bristles except serrated bristles on fourth legs; tarsi very short. Metatarsus: tarsus of the first leg=100: 15.

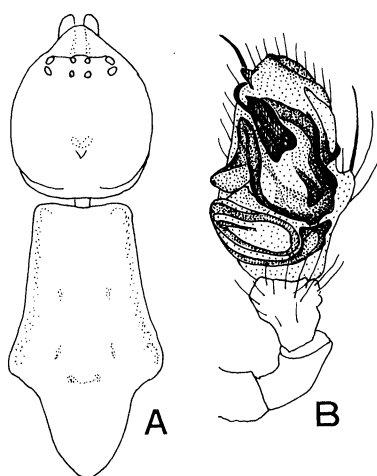


Fig. 12. *Moneta yoshimurai* (YOSHIDA, 1983). A: Male, dorsal view. B: Left palpus of male.

Table 14. Measurement of leg segments of *Moneta yoshimurai* (YOSHIDA) (in mm; ♂).

| Leg | Femur | Patella + Tibia | Metatarsus | Tarsus | Total |
|-----|-------|-----------------|------------|--------|-------|
| I | 2.15 | 2.00 | 2.00 | 0.3 | 6.45 |
| II | 1.30 | 1.35 | 1.15 | 0.2 | 4.00 |
| III | 0.75 | 0.80 | 0.65 | 0.2 | 2.40 |
| IV | 1.65 | 1.40 | 1.55 | 0.4 | 5.00 |

Specimen examined. Paratype: 1♂, Mt. Alishan, Chiai Hsien, Taiwan, 10. VII. 1977, M. YOSHIMURA leg.

Distribution. Taiwan.

摘 要

1993 年春、私は宮崎でとても変わった *Episinus* (ヒシガタグモ) の 1♀ を採集した。この機会に、日本および台湾産の *Episinus* をたくさんの標本に基づいて調べた結果、このクモが真の *Episinus mirabilis* (BÖSENBERG et STRAND, 1906) であることが認められた。そしていままで *Episinus mirabilis* とされている種は、吉田哉 (YOSHIDA, 1985) により *Episinus mirabilis* のシノニムとされていた *Episinus caudifer* DÖNITZ et STRAND, 1906 であることが判明した。更にまたこれらは *Episinus tanikawai*, *spiniger* および *yoshimurai* などと共に *Episinus* 属のシノニムとされていた *Moneta* 属に移すべきことも明かになった。本文では日本および台湾産の“所謂 *Episinus* 属”を *Episinus* と *Moneta* の 2 属に分けると共に、既知の *Episinus* 属 5 種 [*affinis* (ヒシガタグモ), *chikunii* (チクニヒシガタグモ), *kitazawai* (シモフリヒシガタグモ), *nubilus* (ムラクモヒシガタグモ), *punctisparsus*] と *Moneta* 属 5 種 [*caudifer* (ハラナガヒシガタグモ), *mirabilis* (オナガヒシガタグモ), *spiniger*, *tanikawai* (ヤエヤマヒシガタグモ), *yoshimurai*] の再記載を行った。また新たに台湾から 2 新種 *Episinus makiharai* と *Episinus yoshidai* を記載した。

追 記

Moneta mirabilis と *Moneta caudifer* の和名は斎藤 (1941), 八木沼 (1961) などを考慮してオナガヒシガタグモ、ハラナガヒシガタグモとした。また属名は *Episinus* をヒシガタグモ属、*Moneta* をヒメヒシガタグモ属としたい。

最後に、一つの事実を記録しておきたい。吉田哉 (YOSHIDA, 1983) は台湾から新種 *Episinus bicornutus* を記載し、1985 年にこの *E. bicornutus* は *Episinus nubilus* YAGINUMA のシノニムであると発表した。私の研究によれば、吉田の *E. bicornutus* は別種の ♂♀ が混同されたものであって、正基準標本 (holotype) の ♂ は確かに *E. nubilus* に所属するが、副基準標本 (paratype) の ♀ は別種である。本論文では、吉田が混同した種を独立種と認め *Episinus yoshidai* と命名した次第である。

References

- BÖSENBERG, W., & E. STRAND, 1906. Japanische Spinnen. *Abh. senckenb. naturf. Ges.*, **30**: 93–422, pls. 3–9.
 CAMBRIDGE, O. P., 1870. On some new genera and species of Araneidea. *Proc. zool. Soc. London*, **1870**: 728–747.
 CHIKUNI, Y., 1989. Pictorial Encyclopedia of Spiders in Japan. 308 pp. Kaiseisha, Tokyo. (In Japanese.)
 KUMADA, K., 1989. A gynandromorph of the theridiid spider, *Episinus nubilus* YAGINUMA, from Japan. In NISHIKAWA, Y., & H. ONO (eds.): *Arachnological Papers Presented to Takeo Yaginuma*

- on the Occasion of His Retirement, pp. 39–41. Osaka Arachnologists Group, Osaka.
- LEVI, H. W., 1954. The spider genera *Episinus* and *Spintharus* from North America, Central America and the West Indies (Araneae: Theridiidae). *J. N. Y. Ent. Soc.*, **62** (2): 65–90.
- 1964. American spiders of the genus *Episinus*. *Bull. Mus. comp. Zool.*, **131**: 1–25, pls. 1–5.
- & L. R. LEVI, 1962. The genera of the spider family Theridiidae. *Bull. Mus. comp. Zool.*, **127**: 1–71, pls. 1–14.
- ONO, H., K. KUMADA, M. SADAMOTO, & E. SHINKAI, 1991. Spiders from the northernmost areas of Hokkaido, Japan. *Mem. natn. Sci. Mus., Tokyo*, (24): 81–103.
- SAITO, S., 1941. Order Araneae, Suborder Arachnomorphae. In OKADA, Y., et al. (eds.): *Fauna Nipponica*, **9** (2–2), pp. 1–220. Sanseido, Tokyo. (In Japanese.)
- SEO, B. K., 1985. Description of two species of the genus *Episinus* (Araneae: Theridiidae) from Korea. *J. Inst. nat. Sci., Keim. Univ.*, **4**: 113–117.
- YAGINUMA, T., 1958. Spiders from Shimokita Peninsula, Aomori Prefecture, Japan. *Misc. Rep. Res. Inst. Nat. Resources.*, **46/47**: 69–77. (In Japanese, with English descriptions and summary.)
- 1960. Spiders of Japan in color. viii+186 pp., 56 pls., 8 appends. Hoikusha, Osaka. (In Japanese.)
- 1986. Spiders of Japan in Color (new edition). xxiv+305 pp., 64, pls. Hoikusha, Osaka. (In Japanese.)
- YOSHIDA, H., 1978. On some Formosan spiders (1). *Atypus*, (71): 21–28.
- 1983. Spiders from Taiwan IV. The genus *Episinus* (Araneae: Theridiidae). *Acta arachnol.*, **31**: 73–77.
- 1985. A new spider of the genus *Episinus* (Araneae, Theridiidae) from Nagano Prefecture, Central Japan. *Bull. biogeogr. Soc. Japan*, **40**: 25–30.
- 1991. A new species of the genus *Episinus* (Araneae: Theridiidae) from the Yaeyama Islands, Japan. *Acta arachnol.*, **40**: 7–10.